II. Response to Double Patenting Rejections

U.S. Patent No. 6,777,174 in view of Yamashita et al and Aylward et al:

Claims 1-13 are rejected under the judicially created doctrine of obviousness-type double patenting as allegedly being unpatentable over claims 1-9 of U.S. Patent No. 6,777,174 considered in view of Yamashita et al (U.S. Pat. No. 5,573,903) and Aylward et al (U.S. Pat. No. 6,465,164).

Applicants submit a Terminal Disclaimer herewith, thereby obviating the obviousness-type double patenting rejection. Accordingly, Applicants respectfully request withdrawal of the obviousness-type double patenting rejection.

U.S. App. Ser. No. 10/823,700 in view of Yamashita et al:

Claims 1-3 and 5-13 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-8 of Application No. 10/823,700 considered in view of Yamashita et al (5,573,903).

As for the Examiner's comments as to the failure to comply with rule 37 C.F.R. § 1.56, which relates to the duty of disclosure, Applicants note that the present application and the '700 application are related applications, which were both filed as continuing applications of U.S. App. No. 10/401,893, with the '700 application being filed as a result of a restriction requirement. In view of the fact that the '700 application is a divisional application of the present application's parent application, i.e., the '893 application, and since the rationale for restriction between the claims of the '700 application and the '893 application would appear to apply to the claims of the '700 application and the present application, it is submitted that

Applicants, Fuji Photo Film Co., Ltd., and counsel are in compliance with 37 C.F.R. § 1.56.

As for the provisional double patenting rejection, Applicants traverse the rejection as improper in view of the relationship of the applications and the restriction requirement in the parent application, i.e., the '893 application. That is, in view of the restriction requirement in the parent application, the double patenting rejection is improper in the same manner that a rejection of a divisional over a parent is improper where the divisional resulted from a restriction requirement. See 35 U.S.C. § 121 and MPEP § 804.01.

Accordingly, Applicants respectfully request withdrawal of the obviousness-type double patenting rejection.

III. Response to Claim Rejection under 35 U.S.C. § 103

Claims 1-3 and 5-13 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Aylward et al (6,465,164) considered in view of Yamashita et al (5,573,903).

Applicants respectfully traverse the rejection and submit that the cited references, whether taken alone or in combination, do not teach or suggest the claimed invention.

The present invention differs from Aylward et al with respect to the following points.

First, Aylward et al does not disclose or suggest selenium sensitization as recited in the present claims. Aylward et al only discloses gold sensitization in the Examples therein.

Second, Aylward et al does not teach or suggest the sphere-corresponding diameters of the emulsion grains contained in the yellow color-developing blue light-sensitive silver halide emulsion layer of the present invention at all. The emulsion grains contained in each of the

yellow color-developing blue-sensitive silver halide emulsion layers, specifically emulsions BEM-1 and BEM-2, in the Examples of Aylward et al have a side length of 0.6 μm. This length is converted to a sphere-corresponding diameter of 0.75 μm, which is much larger than the upper limit of 0.7 μm recited in the present claims. For example, in the case of a cubic grain, the sphere-corresponding diameter is the diameter of a sphere having a volume the same as that of the cubic grain, and is different from a side length.

Third, green light-sensitive emulsion grains have a side length of 0.30 μm, which is converted to a sphere-corresponding diameter of 0.375 μm, and red and infrared light-sensitive emulsion grains have a side length of 0.40 μm, which is converted to a sphere-corresponding diameter of 0.50 μm. However, these emulsion grains are not blue light-sensitive emulsion grains. In addition, Aylward et al discloses a light-sensitive material for color prints in which blue light-sensitive emulsion grains usually have a larger size than that of any other light-sensitive emulsion grains, such as green or red light-sensitive emulsion grains. This is clear from the description from column 49, line 55 to column 50, line 2 of Aylward et al. In this description, the sphere-corresponding diameter and the side length of the cubic grain are not disclosed. Instead, thicknesses of useful tabular grains of less than 0.5 μm for blue light-sensitive emulsion grains and less than 0.3 μm for any other light-sensitive emulsion grains are disclosed. It is clear that the upper limit of the thickness of blue light-sensitive emulsion grains is about 1.7 times as large as that of other emulsion grains. In color prints, a blue light-sensitive emulsion layer is usually the nearest layer to a support among all light-sensitive emulsion layers, which lowers the sensitivity of the blue light-sensitive emulsion layer. In order to enhance the sensitivity, the blue light-sensitive grains have a larger size than any other

emulsion grains. This is true in the present application, and the upper limit of the sphere-corresponding diameters of green and red light-sensitive emulsion grains is preferably 0.5 μm, which is much smaller than the upper limit of the sphere-corresponding diameter for blue light-sensitive emulsion grains of 0.7 μm, as disclosed in the specification on page 12, line 23 to page, 13, line 5.

Therefore, the sizes of green and red light-sensitive emulsion grains cannot be applied to the size of blue light-sensitive emulsion grains.

Moreover, the present invention employing blue light-sensitive emulsion grains having a sphere-containing diameter of 0.70 μm or less provides unexpectedly superior effects when compared to the prior art.

More specifically, a comparison between sample Nos. 122-124 in the Examples of the present specification clearly shows that blue light-sensitive emulsion grains having a sphere-corresponding diameter of 0.72 μm (which is closer to the upper limit of 0.70 μm recited in the present claims than 0.75 μm, which is the sphere-corresponding diameter of the blue light-sensitive emulsion grains of Aylward et al), which is obtained by converting the side length of the grains, provide insufficient effects, and that both blue light-sensitive emulsion grains having a sphere-corresponding diameter of 0.65 μm and those having a sphere-corresponding diameter of 0.56 μm provides unexpectedly superior effects. The unexpectedly superior effects of the combination of the sphere-corresponding diameter of the blue light-sensitive emulsion grains within the specified range and other features of the present invention are shown in sample Nos. 101-121. For reference, Tables 2 and 3 of the present application are reproduced below.

Table 2

sample	Total gelatin coating amount (g/m^2)	total silver coating amount (g/m^2)	emulsion for blue-sensitive emulsion layer			emulsion for green-sensitive emulsion layer			emulsion for red-sensitive emulsion layer		
			emulsion	sphere-corresponding diameter	chemical sensitization	emulsion	sphere-corresponding diameter	chemical sensitization	emulsion	sphere-corresponding diameter	chemical sensitization
101	6.88	0.54	B-1	0.72	S/Au	G-1	0.45	S/Au	R-1	0.45	S/Au
102	6.88	0.54	B-2	0.65	S/Au	G-1	0.45	S/Au	R-1	0.45	S/Au
103	6.88	0.54	B-3	0.56	S/Au	G-1	0.45	S/Au	R-1	0.45	S/Au
104	6.88	0.54	B-1	0.72	S/Au	G-2	0.35	Se/Au	R-2	0.35	Se/Au
105	6.88	0.54	B-2	0.65	S/Au	G-2	0.35	Se/Au	R-2	0.35	Se/Au
106	6.88	0.54	B-3	0.56	S/Au	G-2	0.35	Se/Au	R-2	0.35	Se/Au
107	6.88	0.54	B-4	0.72	Se/Au	G-1	0.45	S/Au	R-1	0.45	S/Au
108	6.88	0.54	B-5	0.65	Se/Au	G-1	0.45	S/Au	R-1	0.45	S/Au
109	6.88	0.54	B-6	0.56	Se/Au	G-1	0.45	S/Au	R-1	0.45	S/Au
110	6.88	0.54	B-4	0.72	Se/Au	G-2	0.35	Se/Au	R-2	0.35	Se/Au
111	6.88	0.54	B-5	0.65	Se/Au	G-2	0.35	Se/Au	R-2	0.35	Se/Au
112	6.88	0.54	B-6	0.56	Se/Au	G-2	0.35	Se/Au	R-2	0.35	Se/Au
113	4.17	0.40	B-1	0.72	S/Au	G-1	0.45	S/Au	R-1	0.45	S/Au
114	4.17	0.40	B-2	0.65	S/Au	G-1	0.45	S/Au	R-1	0.45	S/Au
115	4.17	0.40	B-3	0.56	S/Au	G-1	0.45	S/Au	R-1	0.45	S/Au
116	4.17	0.40	B-1	0.72	S/Au	G-2	0.35	Se/Au	R-2	0.35	Se/Au
117	4.17	0.40	B-2	0.65	S/Au	G-2	0.35	Se/Au	R-2	0.35	Se/Au
118	4.17	0.40	B-3	0.56	S/Au	G-2	0.35	Se/Au	R-2	0.35	Se/Au
119	4.17	0.40	B-4	0.72	Se/Au	G-1	0.45	S/Au	R-1	0.45	S/Au
120	4.17	0.40	B-5	0.65	Se/Au	G-1	0.45	S/Au	R-1	0.45	S/Au
121	4.17	0.40	B-6	0.56	Se/Au	G-1	0.45	S/Au	R-1	0.45	S/Au
122	4.17	0.40	B-4	0.72	Se/Au	G-2	0.35	Se/Au	R-2	0.35	Se/Au
123	4.17	0.40	B-5	0.65	Se/Au	G-2	0.35	Se/Au	R-2	0.35	Se/Au
124	4.17	0.40	B-6	0.56	Se/Au	G-2	0.35	Se/Au	R-2	0.35	Se/Au

In each emulsion, the sphere corresponding diameter is represented in a unit of μm, and, in the chemical sensitization, S/Au represents sulfur-gold sensitization and Se/Au represents selenium-gold sensitization.

Table 3

sample	example 1 (exposed for 10^{-6} seconds)		example 2 (laser scan exposure)		remarks
	γ	ΔS	γ	ΔS	
101	1.85	0.11	1.85	0.12	comp. ex.
102	1.87	0.09	1.89	0.10	comp. ex.
103	1.88	0.10	1.89	0.11	comp. ex.
104	1.84	0.11	1.87	0.11	comp. ex.
105	1.86	0.10	1.88	0.10	comp. ex.
106	1.88	0.09	1.91	0.09	comp. ex.
107	1.86	0.08	1.90	0.09	comp. ex.
108	1.90	0.09	1.90	0.09	comp. ex.
109	1.91	0.09	1.91	0.10	comp. ex.
110	1.87	0.10	1.90	0.11	comp. ex.
111	1.93	0.08	1.93	0.09	comp. ex.
112	1.92	0.09	1.94	0.09	comp. ex.
113	1.92	0.08	1.93	0.09	comp. ex.
114	1.93	0.07	1.93	0.08	comp. ex.
115	1.94	0.08	1.96	0.08	comp. ex.
116	2.24	0.05	2.27	0.06	comp. ex.
117	2.29	0.06	2.31	0.05	comp. ex.
118	2.35	0.05	2.38	0.05	comp. ex.
119	2.26	0.05	2.29	0.05	comp. ex.
120	2.57	0.04	2.62	0.03	invention
121	2.65	0.03	2.71	0.03	invention
122	2.29	0.05	2.30	0.06	comp. ex.
123	2.62	0.03	2.68	0.03	invention
124	2.77	0.03	2.83	0.03	invention

Yamashita et al also differs from the present invention with respect to the following points.

First, the light-sensitive material of Yamashita et al is a monochromic material rather than a color light-sensitive material as in the present invention. Therefore, the total amounts of gelatin and silver taught by Yamashita et al cannot be applied to those of the present invention. In other words, conditions for a light-sensitive material having only one light-sensitive layer cannot be applied to those for a color light-sensitive material having at least three light sensitive

layers. Moreover, Yamashita et al does not provide any disclosure regarding color light-sensitive materials.

Secondly, the silver halide emulsion in each of the Examples of Yamashita et al is a silver iodobromide emulsion rather than an emulsion having a high silver chloride content of at least 90 mol % as recited in the present claims.

Applicants submit that in view of the differences between the references and the present invention there is no motivation for one of ordinary skill in the art to combine the references with a reasonable expectation of success in achieving the claimed invention. That is, a person skilled in the art would not have selected these references having different purposes from the huge number of patents regarding silver halide light-sensitive materials and combined them with an expectation of achieving the claimed invention. Moreover, neither of Aylward et al nor Yamashita et al discloses or suggests the sphere-corresponding diameter of blue light-sensitive emulsion grains recited in the present claims. Therefore, even if these references were combined, the present invention would not have been achieved.

Also, Aylward et al neither discloses nor suggests the combined use of sensitizers. Even if the gold sensitizer used in Aylward et al is replaced with the selenium sensitizer described in Yamashita et al , such a replacement would not lead to a combined use of selenium and gold sensitizers as recited in the present application.

In addition, even when the total amount of silver in the Aylward et al is 0.5 g/m^2 or less, the present specification explicitly shows that a combination of other features of the present invention, namely the sphere-corresponding diameter of the blue light-sensitive emulsion grains and the combined use of gold and selenium sensitizers provides significant effects as is clear

from the comparison between sample Nos. 113-115 and sample Nos. 119-121. Thus, the presently claimed invention provides unexpectedly superior results when compared to the prior art.

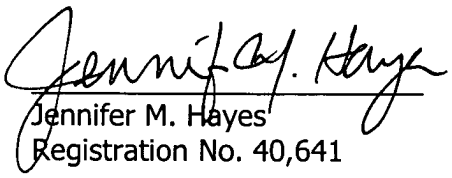
Accordingly, the present invention is not rendered obvious by the cited references. Thus, Applicants respectfully request withdrawal of the obviousness rejection.

IV. Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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